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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,096	02/09/2005	Gordhanbhai N. Patel	27845-18	4381
46591	7590	01/12/2009		
NEXSEN PRUET, LLC P.O. BOX 10648 GREENVILLE, SC 29603			EXAMINER JACKSON, MONIQUE R	
			ART UNIT 1794	PAPER NUMBER
			MAIL DATE 01/12/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/524,096

Applicant(s)

PATEL, GORDHANBHAI N.

Examiner

Monique R. Jackson

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-13, 17, 18, 20, 21, 27, 30-33, 35, 38, 39, 41, 43 and 67 is/are pending in the application.
- 4a) Of the above claim(s) 7-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5,6,12,13,17,18,20,21,27,30-33,35,38,39,41,43 and 67 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-846)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The amendment filed 9/10/08 has been entered. Claims 1, 5-13, 17, 18, 20, 21, 27, 30-33, 35, 38, 39, 41, 43 and 67 are pending in the application. Claims 7-11 have been withdrawn from consideration. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

2. Claims 5, 6, 13, 20, and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Although alternative expressions are permissive in the claims, they should be drafted in proper alternative format, i.e. “**selected from A, B or C**”; or in proper Markush claim format, i.e. “selected from the **group consisting of A, B and C**”. A claim that recites “selected [chosen] from A, B, and C” as in the instant claims is improper.

Claim Rejections - 35 USC § 102

3. Claims 41 and 67 are rejected under 35 U.S.C. 102(e) as being anticipated by Adamovics (US 2004/0211917 A1) for the reasons recited in the prior office action wherein the Examiner notes that Claims 41 and 67 are not provided the benefit of the provisional filing date because the provisional application fails to provide support for the aspect ratio range “of less than 20:1” as recited in these claims and the Applicant’s response filed 9/10/08 is not an appropriate showing under 37 CFR 1.131 to antedate the reference.

4. Claims 1, 5, 17, 18, 20, 21, 27, 30, 33, and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by *Three-Dimensional Optical Storage Memory* (herein referred to as Parthenopoulos et al.) Parthenopoulos et al teach a three-dimensional (3-D) optical memory

device that allows fast random access of the information and extremely high bit densities wherein the device is based on two-photon writing, reading, and erasing of the information in a photochromic material embedded in a polymer matrix wherein absorption and emission data show that two-photon writing and reading of information is feasible (Abstract.) Parthenopoulos et al specifically teach that the 3-D device comprises a volume of a transparent polymer doped with a light sensitive chemical, in particular, spiropyran, embedded in the transparent polymer, wherein Parthenopoulos et al specifically utilize 100 micron polymers films (*reads upon the relative term "thick" in comparison to thinner films, e.g. nanometer thickness*) containing 1% of a radiation sensitive component formed by solvent casting films from polystyrene, polymethylmethacrylate and polyethyleneglycol in chloroform or dichloroethane solutions (pages 843-844.)

5. Claims 1, 5, 17-18, 20, 21, 33, 38, 41, and 67 are rejected under 35 U.S.C. 102(b) as being anticipated by Moscovitch (USPN 5,498,876.) Moscovitch teaches a 3-D ORAM comprising a volume of a transparent polymer doped with a light sensitive chemical and, in particular, spirobenzopyran (Col. 6); and a spectrometer for monitoring neutron and other types of radiation, as well as an electronic dosimeter for providing real time monitoring of radiation exposure, all based on use of an optical memory element (Col. 8, Col. 12.) Moscovitch specifically teaches that the 3-D ORAM is a volume, typically a cube (*hence 1:1 aspect ratio*), of transparent polymer doped with a light sensitive chemical (Col. 2, lines 15-31) and that the light sensitive chemical can include other functionally equivalent photochromic materials to spirobenzopyrans (Col. 12, lines 58-Col. 13, line 3.)

Claim Rejections - 35 USC § 103

6. Claims 6, 12, 13, 27, 30-32, 35, 39, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moscovitch in view of in view of Kim et al (US 2003/0118924 A1) or Robillard (USPN 5,098,806) or Patel et al (USPN 5,420,000). The teachings of Moscovitch are discussed above. Though Moscovitch teaches that other light sensitive materials can be utilized, Moscovitch does not specifically recite diacetylene or the diacetylenes instantly claimed. However, diacetylenes are known functionally equivalent radiation sensitive compounds to spirobenzopyrans or spiropyranes in the art, as taught by Kim et al or Robillard or Patel et al, and hence would have been obvious to one having ordinary skill in the art at the time of the invention, wherein the instantly claimed diacetylene compounds are obvious species of diacetylene compounds utilized in the art and would have been obvious to one having ordinary skill in the art at the time of the invention. Further, one having ordinary skill in the art at the time of the invention would have been motivated to incorporate conventional additives or observable change enhancers, such as those instantly claimed, to the dosimeter taught by Moscovitch given the reasonable expectation of success. In terms of solvent casting or solidification of molten polymer, Moscovitch does not specifically teach how the cube of material is formed however solvent casting from a suitable solvent or solidification from a molten material are obvious polymer forming or casting methods in the art and would have been obvious to one having ordinary skill in the art at the time of the invention, wherein one skilled in the art would have been motivated to utilize any conventional solvent including the instantly claimed solvents which are obvious species of solvents utilized in the art. Lastly, though Moscovitch teaches that the ORAM is three-dimensional device and may be in the form of a cube and/or

worn by a user, Moscovitch does not specifically teach that the thickness of the device is greater than 0.1 millimeters as instantly claimed. However, one having ordinary skill in the art at the time of the invention would have been motivated to determine the optimum shape, size and thickness based upon the desired end use of the device wherein given the teachings of Moscovitch with regards to wearing the device, a thickness on the same order of magnitude as instantly claimed would have been obvious at the time of the invention.

Response to Arguments

7. Applicant's arguments, see page 8-10, filed 9/10/08, have been considered but are not persuasive and/or moot in view of the new grounds of rejection. In terms of Claims 41 and 67, the Examiner notes that though the provisional application provides general support for the claimed invention, the provisional application does not provide support for the specific aspect ratio of less than 20:1 as recited in Claims 41 and 67. Hence, given that the Applicant's arguments are not a proper showing under 37 CFR 1.131, the rejection over Adamovics with regards to these two claims has been maintained.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R. Jackson whose telephone number is 571-272-1508. The examiner can normally be reached on Mondays-Thursdays, 10:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Monique R Jackson/
Primary Examiner, Art Unit 1794
January 7, 2009